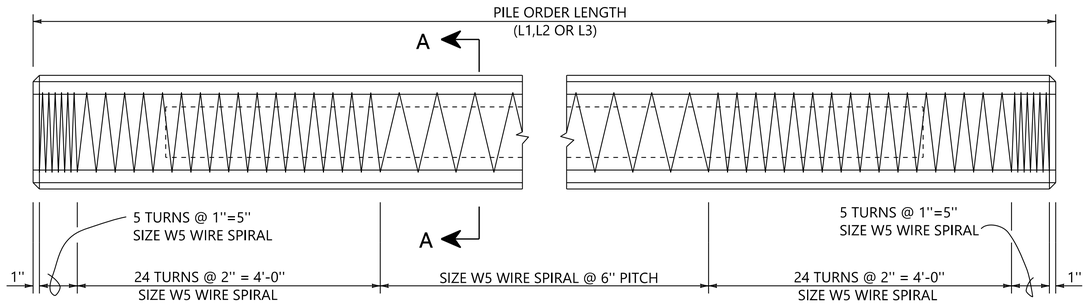
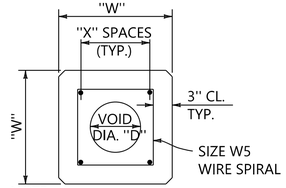
REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER

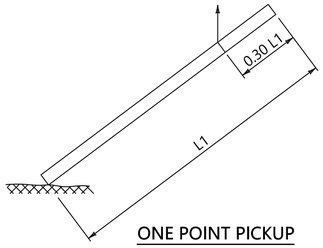


14''-36'' SQUARE PILES
NO SCALE

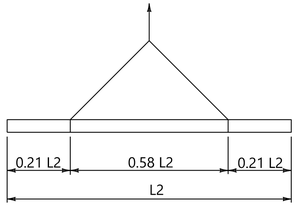


NOTE:
STRAND PROTECTION: WHEN STRANDS ARE CUT FLUSH WITH END SURFACES OF PILE, THEY SHALL BE PAINTED WITH AN APPROVED EPOXY IMMEDIATELY AFTER CUTTING.

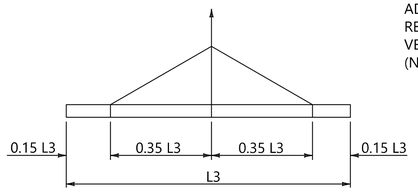
SECTION A-A
NO SCALE



ONE POINT PICKUP



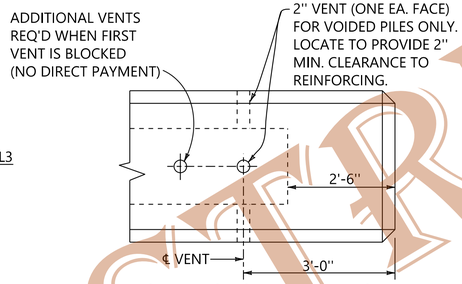
TWO POINT PICKUP



THREE POINT PICKUP

NOTE: PICK-UP POINTS TO BE PLAINLY MARKED ON PILES

PICKUP DETAILS
NO SCALE

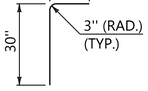


NOTE: VENTS REQ'D AT PILE HEAD ONLY.

PILE HEAD DETAIL
NO SCALE

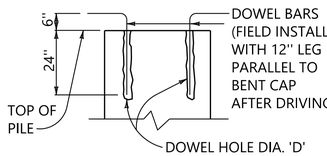
NOTES

1. CONCRETE: THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR APPROVAL A CONCRETE MIX WITH MINIMUM COMPRESSIVE CYLINDER STRENGTH OF 5,000 P.S.I. AT 28 DAYS UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS. CONCRETE STRENGTH AT TIME OF TRANSFER OF PRESTRESSING FORCE SHALL BE 4,000 P.S.I. OR GREATER. CEMENT SHALL BE TYPE II EXCEPT WHEN OTHERWISE NOTED ON THE CONTRACT DRAWINGS, SPECIFICATIONS, OR SPECIAL PROVISIONS.
2. PRESTRESSING STEEL: STRESSING CABLE SHALL BE ½'' DIA., SEVEN WIRE, UNCOATED, LOW RELAXATION, GRADE 270, AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 203. AN INITIAL TENSION OF 30,975 LBS. SHALL BE APPLIED TO EACH STRAND.
3. REINFORCING BARS: REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL BARS, GRADE 60 AND SHALL MEET THE REQUIREMENTS OF AASHTO-M31.
4. SPIRAL REINFORCING STEEL: SPIRAL REINFORCEMENT SHALL BE SIZE W5(MIN.) COLD-DRAWN STEEL WIRE AND SHALL CONFORM TO AASHTO M 336.
5. FABRICATION TOLERANCES: MANUFACTURE OF THE PILING AND FABRICATION TOLERANCES SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE DETENSIONING PROCEDURE SHALL BE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL.
6. CHAMFERS AND CORNERS: ON PILES 18'' OR SMALLER, ALL EXPOSED CONCRETE CORNERS ARE TO HAVE ¾'' CHAMFERS. ON PILES 20'' OR LARGER, ALL EXPOSED CONCRETE CORNERS ARE TO HAVE 1½'' CHAMFER, A 1'' RAD. CURVE WILL BE PERMITTED IN LIEU OF CHAMFERS SHOWN ABOVE. HOWEVER, ALL BENT PILES FURNISHED SHALL BE OF SAME CONFIGURATION.
7. PICK-UP AND HANDLING: MAXIMUM LENGTHS FOR PICK-UP HAVE BEEN DETERMINED USING THE FOLLOWING STRESS ASSUMPTIONS:
   LOADING: 1½ TIMES FULL DEAD LOAD. ALLOWABLE TENSILE STRESS EQUALS $5\sqrt{f'c}$ PSI. THIS STRESS AND LOADING CRITERIA ARE BASED ON CAREFUL HANDLING OF THE PILE. ROTATION OF PILE IN THE SLING IS TO BE PREVENTED UNTIL PILE IS IN VERTICAL POSITION. PICK-UP POINTS FOR ALL PILES TO BE CLEARLY MARKED ON PILE. PICK-UP POINTS SHOWN MAY BE MODIFIED FOR TRANSPORTATION PURPOSES PROVIDED THE TENSILE STRESS BASED ON ABOVE LOADING CRITERIA DOES NOT EXCEED $5\sqrt{f'c}$ PSI. THE MODIFIED PICK-UP POINTS SHALL BE SENT TO THE BRIDGE DESIGN ENGINEER FOR REVIEW.
   PICK-UP DEVICES: CAST-IN-PLACE LOOPS MAY BE USED AS PICK-UP DEVICES FOR PRESTRESSED PILES. FOR PILE ABUTMENTS AND FOR PILE FOOTINGS THAT ARE TO BE CONSTRUCTED BELOW GROUNDLINE, THE FOLLOWING SHALL APPLY: THE LOOPS SHALL BE CUT OFF FLUSH WITH FACE OF THE PILE AND EXPOSED SURFACES OF THE LOOPS SHALL BE COATED WITH AN APPROVED EPOXY. FOR PILE BENTS AND FOR PILE FOOTINGS THAT ARE TO BE CONSTRUCTED ABOVE POOL (WATERLINE), THE FOLLOWING SHALL APPLY: A 3''x3'' BY 1½'' DEEP RECESS (BLOCKOUT) SHALL BE PROVIDED AT EACH LOOP PROTRUSION. THE LOOPS SHALL BE CUT OFF FLUSH WITH THE RECESSED FACE OF THE PILE AND THE RECESS SHALL BE FILLED WITH AN APPROVED EPOXY. THE EPOXY SHALL OBTAIN THE 28-DAY STRENGTH SPECIFIED FOR THE PILE PRIOR TO DRIVING THE PILE. THE TYPE OF PICK-UP DEVICE TO BE USED BY THE CONTRACTOR SHALL BE CLEARLY SHOWN ON THE PRESTRESSED CONCRETE PILE SHOP DRAWINGS.
8. SHIPPING: PILING SHALL BE HELD AT THE PLANT FOR A MINIMUM OF 21 DAYS PRIOR TO SHIPPING. PILING SHALL NOT BE TRANSPORTED UNTIL THE MINIMUM 28 DAY COMPRESSIVE CONCRETE STRENGTH IS OBTAINED AND VERIFIED BY TEST CYLINDERS.
9. DRIVING: PILES SHALL BE DRIVEN TO AT LEAST THE MINIMUM TIP ELEVATION AS SHOWN ON CONTRACT PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. ⚠ PILE HEAD ATTACHMENT: PROVISION SHALL BE MADE FOR PILE HEAD ATTACHMENT BY STRAND EXTENSION OR DOWEL BAR EXTENSION (SEE DETAIL, THIS SHEET) FOR BENT CAPS AND FOR PILE FOOTINGS WHENEVER FOOTINGS ARE TO BE CONSTRUCTED ABOVE POOL (WATERLINE). THE CONTRACTOR'S PROPOSED METHOD OF PILE HEAD ATTACHMENT SHALL BE CLEARLY SHOWN ON THE PRESTRESSED CONCRETE PILE SHOP DRAWINGS. A PILE HEAD ATTACHMENT IS NOT REQUIRED FOR PILES IN FOOTINGS TO BE CONSTRUCTED BELOW GROUNDLINE.
11. BUILD-UP: THE USE OF A BUILD-UP (DRIVING OR NON-DRIVING) SHALL BE SUBJECT TO APPROVAL OF THE BRIDGE ENGINEER. SUBMIT DETAILS TO THE BRIDGE ENGINEER. CONCRETE SHALL BE THE SAME JOB MIX AS THE PRESTRESS CONCRETE.
12. JETTING OF PILES: JETTING OF PRESTRESSED CONCRETE PILES IS PERMISSIBLE SUBJECT TO SATISFYING THE CONDITIONS STATED IN ARTICLE 505.03(c)2 OF THE STANDARD SPECIFICATIONS. REFERENCE THIS ARTICLE OF THE SPECIFICATIONS FOR JET TUBE INSTALLATION REQUIREMENTS.



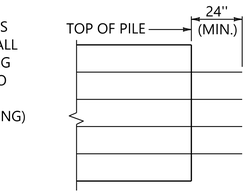
DOWEL BAR DETAIL
(TYP. #4 THRU #8)

NOTE:
DOWEL HOLES SHALL BE DRILLED AFTER DRIVING IS COMPLETE. HOLES SHALL BE CLEANED PRIOR TO SETTING DOWEL BARS AND SHALL BE FREE OF DUST, OIL, WATER AND OTHER CONTAMINENTS. DOWEL BARS SHALL BE SET USING AN APPROVED EPOXY.



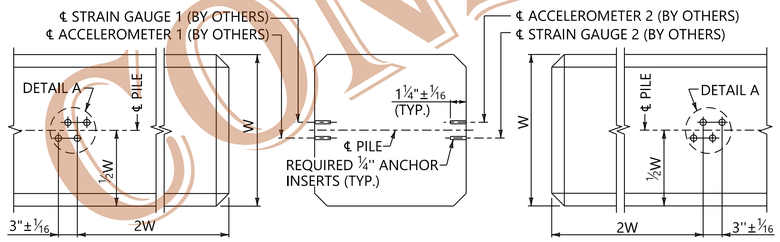
PILE HEAD ATTACHMENT

ALTERNATE 'B'
(DOWEL BAR EXTENSION)



PRESTRESSED STRANDS TO EXTEND 24'' BEYOND PILE CUT-OFF TO PROVIDE ATTACHMENT OF PILE TO BENT AND ABUTMENT CAPS (TYP. 14'' THRU 36'' PILES)

ALTERNATE 'A'
(STRAND EXTENSION)



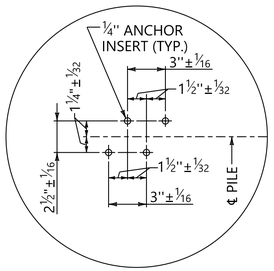
✱ LOCATION OF REQUIRED ¼'' INSERTS
NO SCALE

✱ ¼'' INSERTS: INSERTS FOR ALDOT MATERIALS & TEST BUREAU USE SHALL BE EITHER CAST INTO OR DRILLED INTO ALL PILING.

⚠ PILE HEAD ATTACHMENT

PILE PROPERTIES

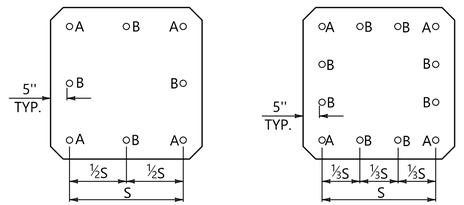
PILE SIZE ''W''	WEIGHT PER LIN. FT. (Lbs./Ft.)	SECTION MODULUS OF CROSS SECTION (in.³)	AREA OF NORMAL CROSS SECTION (in.²)	VOID DIA. ''d''	LOW RELAXATION STRAND					
					NO. OF STRANDS	STRAND LAYOUT (''X'' SPACES)	INITIAL PRESTRESS (PSI)	MAX. CASTING LENGTH 1 POINT PICK-UP L1	MAX. CASTING LENGTH 2 POINT PICK-UP L2	MAX. CASTING LENGTH 3 POINT PICK-UP L3
14'' SOLID	204	457	196	0.00''	8	2	1264	61'-0''	87'-0''	125'-0''
16'' SOLID	267	683	256	0.00''	8	2	968	60'-0''	84'-0''	121'-0''
18'' SOLID	338	972	324	0.00''	12	3	1147	67'-0''	95'-0''	136'-0''
20'' SOLID	417	1,333	400	0.00''	12	3	929	66'-0''	93'-0''	134'-0''
24'' VOIDED	510	2,254	489	10.50''	16	4	1013	80'-0''	113'-0''	162-0''
30'' VOIDED	715	4,257	686	16.50''	20	5	903	89'-0''	126'-0''	181'-0''
36'' VOIDED	936	7,077	898	22.50''	28	7	966	103'-0''	145'-0''	208'-0''



DETAIL A

PILE SIZE	DOWEL BAR SIZE	
	LOCATION A	LOCATION B
14''	#7	—
16''	#8	—
18''	#8	#4
20''	#8	#6
24''	#8	#6
30''	#8	#7
36''	#8	#8

DOWEL SIZE	D
#4,#6	1''
#7,#8	1¼''



14'' THRU 24'' PILES

30'' & 36'' PILES

DOWEL HOLE PATTERN

ASSISTANT BRIDGE ENGINEER	BRIDGE ENGINEER
DATE 11/20/2020	DATE 11/20/2020

ALABAMA DEPARTMENT OF TRANSPORTATION

ALDOT ORIGINAL CONTRACT DRAWINGS BRIDGE BUREAU

REVISIONS
1. REVISE NOTE 10
KCM 1-17-20

THIS BRIDGE SPECIAL PROJECT DRAWING FOR USE ONLY ON:
PROJECT NO. _____
COUNTY(S) _____

PRECAST PRESTRESSED CONCRETE PILES
14-16-18-20-24-30-36 INCHES

BRIDGE SPECIAL PROJECT DRAWING

PSCP-1

SHEET 1 OF 1